### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453

(707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-022055 Address: 333 Burma Road **Date Inspected:** 20-Mar-2011

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Liu Hua Jie. **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** OBG components.

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Mr. Shailesh Wadkar was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA Inspector observed and/or found the following:

Trial Assembly:

This QA Inspector observed the following work in progress:

OBG Seg 13AW:

This QA Inspector observed ZPMC personnel performing the assembly of Seg 13AW with Seg 12CW.

OBG Seg 13AE:

Repair welding of weld joint nos: Seg3007N-163 and 158 [I-rib on Side Panel (SP) to Floor Beam (FB) 3114A, complete joint penetration (CJP) weld, at panel point (PP) 118.35]. The welder is identified as 200113 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC Quality Control (QC) was identified as Shen Jian Bo. The welding variables recorded by this QC appeared to comply with welding procedure specification (WPS): 345-SMAW-3G(3F)-FCM-Repair. Repair welding was done as per Welding Repair Report (WRR): 20381 Rev-0.

# WELDING INSPECTION REPORT

(Continued Page 2 of 3)

The SMAW process on weld joint no: Seg3007F-028 [Stiffener X3424A to SP3060E, fillet weld at PP119]. The welder is identified as 037743 and was observed welding in 3F position. ZPMC QC was identified as Shen Jian Bo. The welding variables recorded by this QC appeared to comply with WPS: B-P-2113-FCM-1.

Bay 14:

OBG Seg 14W:

The Flux Cored Arc Welding (FCAW) process on weld joint no: Seg3020AQ-004 [Stiffener Plate (X4960D) to Floor Beam (FB) 3327A, complete joint penetration (CJP) weld, at panel point (PP) 127]. The welder is identified as 045175 and was observed welding in 3G position. ZPMC Quality Control (QC) was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with welding procedure specification (WPS): B-T-2233-ESAB.

The FCAW process on weld joint no: Seg3020AQ-005 [Stiffener Plate (X4960D) to Top Anchorage Plate (AP3017A), CJP weld, at PP127]. The welder is identified as 045175 and was observed welding in 2G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: Seg3020BD-002 [East Cable Horizontal stiffener plate (X5079B) on Vertical Shear Plate sub-assembly (SA3444A) to Anchor Plate (AP3032A), CJP weld at PP126]. The welder is identified as 045246 and was observed welding in 4G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SA3448-021 [Brace Plate (X5073B) to stiffener X5078E on SA3448A, CJP weld]. The welder is identified as 051348 and was observed welding in 4G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-B-U2-FCM-1.

The FCAW process on weld joint no: Seg3020AP-027 [Stiffener Plate (X4960D) to AP3019A, CJP weld, at PP127]. The welder is identified as 045175 and was observed welding in 2G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: Seg3020AP-029 [Stiffener Plate (X4960D) to FB3327A, CJP weld, at PP127]. The welder is identified as 045175 and was observed welding in 3G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The SMAW process on weld joint no: SA3449-021 [Brace Plate (X5071D) to stiffener X5078F on SA3449A, CJP weld]. The welder is identified as 069683 and was observed welding in 4G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-B-U2-FCM-1.

# WELDING INSPECTION REPORT

(Continued Page 3 of 3)

The SMAW process on weld joint no: SEG3020AJ-286 [I-rib stiffener (RS3517N) to Bottom Plate (BP) 3088A, CJP weld in between PP127 to PP127.5]. The welders are identified as 037779 and 067707 and were observed welding in 2G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2212-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020AJ-290 [I-rib stiffener (RS3517P) to BP3089A/3090A, CJP weld in between PP127.5 to PP128]. The welder is identified as 066398 and was observed welding in 2G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2212-Tc-U4b-FCM-1.

OBG Seg 13BW:

The SMAW process on weld joint no: Seg3014-006 [Deck Panel (DP) 3132A to DP3133A, CJP splice weld]. The welders are identified as 067572, -67764 and 066443 and were observed welding in 4G position. ZPMC QC was identified as Zhang Ling. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-B-U2-FCM-1.

OBG Seg 13CW:

The FCAW process on weld joint no: SA3232B-004 (DP diaphragm to FB, CJP weld, at PP123.5). The welder is identified as 048696 and was observed welding in 2G position. ZPMC QC was identified as Zhang Ling. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable Contract documents.

### **Summary of Conversations:**

No significant conversations were reported on this date.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang; phone: 15000422372., who represents the Office of Structural Materials for your project.

Inspected By:	Wadkar, Sailesh	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer